

ATTACHMENT A

Clean Replacement/New Claims (entire set of pending claims)

Following herewith is a clean copy of the entire set of pending claims.

1. A method of forming a digital directional coupler, which comprises at least two optical waveguides, said method comprising scanning a laser beam across a photosensitive material to induce refractive index changes in the material to form each of the waveguides, wherein the scanning speed is varied to create a refractive index taper of a selected functional form in each of the waveguides.
 2. A method as claimed in claim 1 wherein the laser beam has a doughnut type irradiance distribution.
 3. (amended) A method as claimed in claim 1 wherein the laser is a TEM_{01}^* mode laser.
 4. (amended) A method as claimed in claim 1 wherein the mode of the laser is chosen so as to provide an increased coupling strength between adjacent ones of the waveguides.
 5. (amended) A method as claimed in claim 1 wherein the photosensitive material is in a planar form.
 6. (amended) A method as claimed in claim 1 wherein the scanning speed is varied during the forming of each waveguide in a manner such that adjacent ones of the waveguides are refractive index tapered in opposite directions.
 7. (amended) An optical waveguide device when produced utilizing the method as claimed in claim 1.
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